Wildlife disease outbreak response

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Workshop for the National Focal Points of Wildlife. Europe and Central Asia

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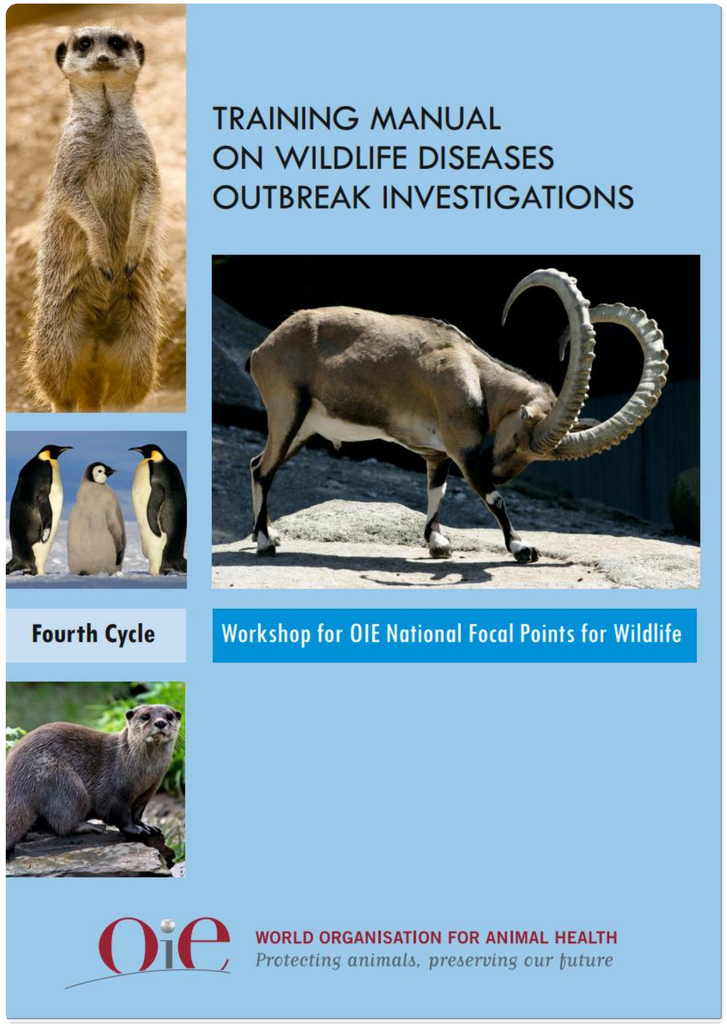
Wildlife disease outbreak investigations in 4th cycle manual

"...to ensure team readiness to respond to an actual outbreak"

- ✓ Verify that an outbreak is occurring
- ✓ Confirm the diagnosis
- ✓ Establish case definition
- ✓ Descriptive epidemiology
- ✓ Hypothesis generation
- ✓ Analytic epidemiology
- ✓ Preliminary control/prevention measures
- ✓ Communicate findings
- ✓ Establish disease surveillance/monitoring



Before the outbreak

SWEDISH VETERINARY AGENCY

Photo: Mikael Kristersson

Emergency preparedness and contingency planning

- ✓ Established chain of command
- ✓ Systems for rapid detection and confirmation
- ✓ Outbreak investigation procedures
- ✓ Rapid containment measures (e.g. movement control, disinfection, vaccination, culling)
- ✓ Communication strategy

https://www.woah.org/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/A_Guidelines_for_Animal_Disease_Control_final.pdf

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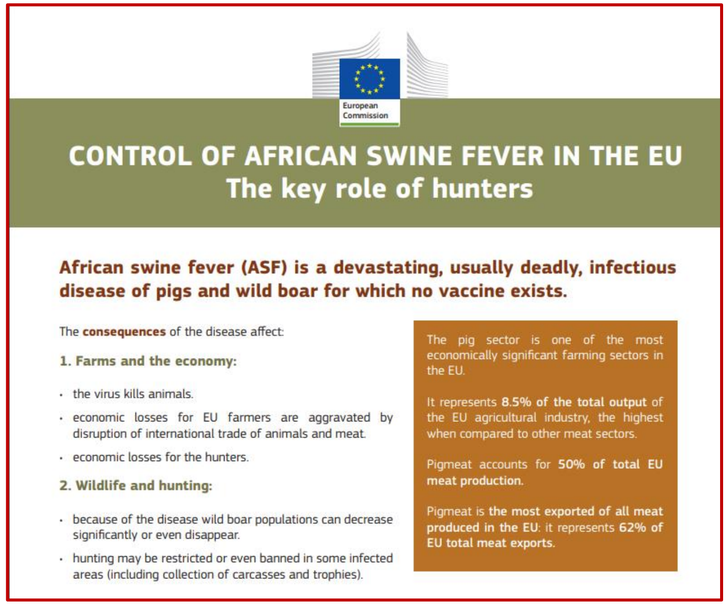
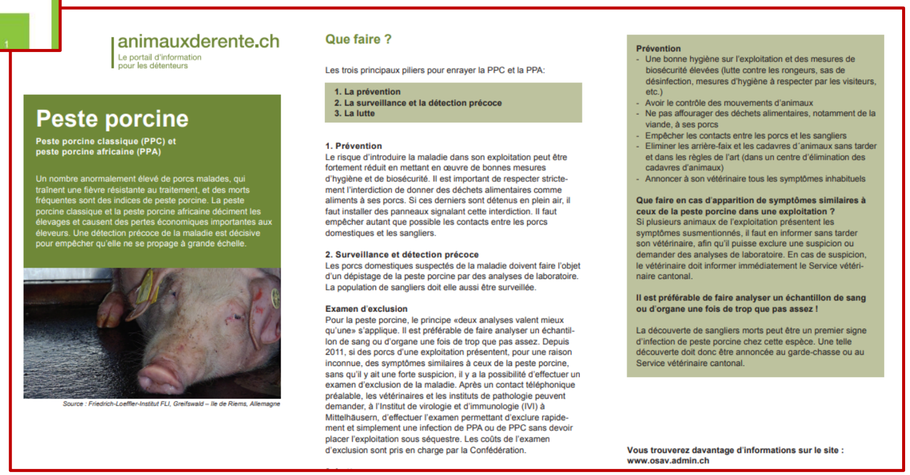
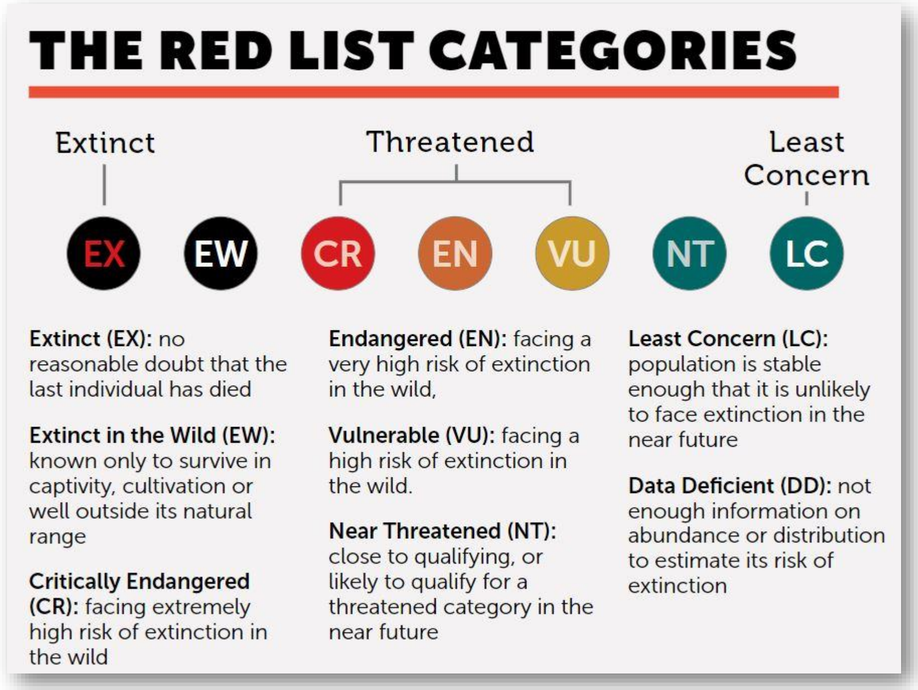
Information to the public, awareness





Information to the public: protect the wildlife!

- Preserving functioning ecosystems with predominantly native species.
- Ecological balance, ecosystem services
- Conservation
- Ethical considerations



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Outbreak response, public perception and conservation issues: bats

- 1,200 bat species throughout the world
- 53 different bats in Europe
- Keystone species= essential for ecosystems
- Majority of bats are insectivorous, significant role in controlling insect populations. Bats contribute up to 50 billion USD annually to the USA agricultural economy through their part in insect control
- About one third of all bat species are fruit or nectar feeding, pollinate numerous plants and disperse seeds

- Threats of SARS-CoV-2 to bats! (public perception)

Serotine bat (*Eptesicus serotinus*), maintenace of EBLV1

https://batslife.eu/item/%D0%B5ptesicus-serotinus/

WOAH Emergency preparedness

WOAH standards and guidelines relevant to emergency preparedness

Specific standards and recommendations on contingency planning are available in **Chapter 4.6. of the *Aquatic Code***.

In the *Terrestrial Code*, Article 4.19.3. of **Chapter 4.19. on official control programmes for emerging and listed diseases** provides the transversal international standards for emergency preparedness.

Other horizontal chapters, listed below, also refer to this subject:

- Article 3.2.7. of **Chapter 3.2. on the quality of Veterinary Services** states that Veterinary Services should 'be prepared to respond effectively to sanitary emergencies'. Point 4 refers to 'emergency management, including preparedness and response planning, a legal framework, and access to the human, physical and financial resources to respond rapidly to sanitary emergencies in a well-coordinated manner'.
- Article 1.4.5. of **Chapter 1.4. on surveillance** covers early warning systems.
- Chapters 1.7. to 1.12. in **Section 1** require Members that submit a dossier for official status recognition to annex their contingency plan and share any information related to simulation exercises.

Some disease-specific chapters also explicitly require contingency plans (e.g. **Chapter 8.8. on foot and mouth disease**).

The ***Guidelines for Simulation Exercises*** were developed in 2020 to provide more guidance for WOAH Members to prepare, deliver and learn from exercises.

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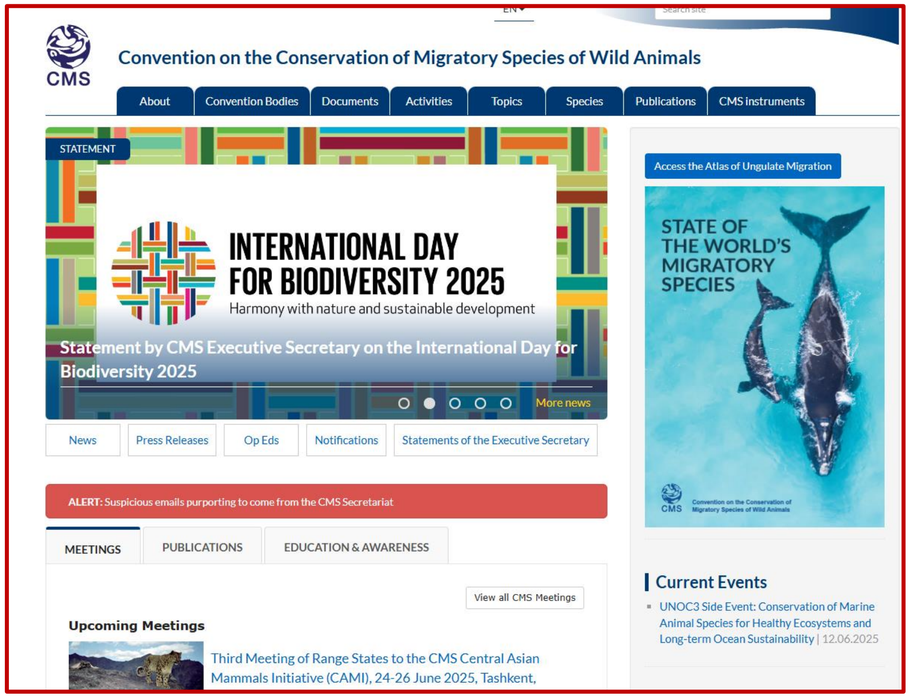
Legal/regulatory framework for contingency planning and outbreak response

- National legislation
- WOAH
- EU-AHL (Animal Health Law)
- International agreements and commitments: IUCN, CMS, etc



https://www.cms.int/

EU Animal Health Law (AHL): contingency plans and wild animals

The EU animal health law

SUMMARY OF:

Regulation (EU) 2016/429 on transmissible animal diseases

WHAT IS THE AIM OF THE REGULATION?

- It aims to prevent and control animal diseases that can be transmitted to other animals or humans.
- The animal health law is part of a package of measures proposed by the European Commission in May 2013 to strengthen the enforcement of health and safety standards for the entire agri-food chain.

KEY POINTS

This comprehensive regulation supports the European Union (EU) livestock and food production sectors and the related EU market in terms of sustainability, competitiveness, growth and jobs. It replaces and extends existing EU rules on animal health, bringing most of them together into one simpler law with a better focus on the key priorities in tackling disease. These priorities include:

- **clearer responsibilities** for farmers (livestock, fish and shellfish farms) and other people involved (e.g. vets) regarding early detection in order to prevent major disease outbreaks or prevent diseases from spreading to limit their damage;
- **simplified administration** for international trade in certain live animals and animal products (such as semen, ova and embryos);
- a **clearer legal basis** and **better tools** for veterinary authorities to fight potentially devastating transmissible diseases, particularly for surveillance, diagnosis and notification;
- **more flexibility** to adjust rules to local circumstances and emerging issues such as climate and social change;
- **reducing adverse effects** on animal and human health and the environment.

It sets out requirements for:

- **disease prevention** and **preparation for possi**
  diagnostic tools, vaccination and medical treatm
- the **identification and registration** of animals a
  certification and tracing of their consignments;
- the **entry** of animals and animal products into th
- **disease control and eradication**, including em
  culling and vaccination.

The rules cover animal diseases in all kept animals (i
terrestrial and aquatic. They do not directly cover ani
their welfare is recognised and taken into account whe

The EU animal health law is supplemented by the follo

- traceability and animal health requirements for n
  embryos) of certain kept terrestrial animals, and

It sets out requirements for:

- **disease prevention** and **preparation for possible outbreaks** (e.g. **biosecurity*** measures) such as the use of diagnostic tools, vaccination and medical treatments;
- the **identification and registration** of animals and certain animal products (e.g. semen, ova, embryos) and the certification and tracing of their consignments;
- the **entry** of animals and animal products into the EU and their movement within the EU;
- **disease control and eradication**, including emergency measures such as restrictions on the movement of animals, culling and vaccination.

The rules cover animal diseases in all kept animals (including pets in some cases), wild animals and animal products, both terrestrial and aquatic. They do not directly cover animal welfare, although the link between the health of the animals and their welfare is recognised and taken into account when considering the impact of disease.

"Prevention measures should always be in place, ready to act against diseases when they occur"

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EU Animal Health Law: wild animals

Section 5

Wild animals

Article 70

Wild animals

1. Where the competent authority of an affected Member State suspects or officially confirms the presence of a listed disease as referred to in point (a) of Article 9(1) in wild animals, it shall:

(a) conduct, where relevant for that particular listed disease, surveillance in the wild animal population;

(b) take the necessary disease prevention and control measures.

2. The disease prevention and control measures provided for in point (b) of paragraph 1 of this Article may include one or more of the measures laid down in Article 53 to 69 and shall take into account the disease profile and the affected wild animals and the risk of transmission of diseases to animals and humans.

3. The Commission shall be empowered to adopt delegated acts in accordance with Article 264 concerning:

(a) criteria and procedures for surveillance pursuant to point (a) of paragraph 1 of this Article in the case of official confirmation of a listed disease as referred to in point (a) of Article 9(1), in accordance with Article 27;

▼B

(b) detailed rules supplementing the disease prevention and control measures to be taken pursuant to point (b) of paragraph 1 of this Article in the case of official confirmation of a listed disease as referred to in point (a) of Article 9(1).

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EU-AHL DISEASE AWARENESS, PREPAREDNESS AND CONTROL

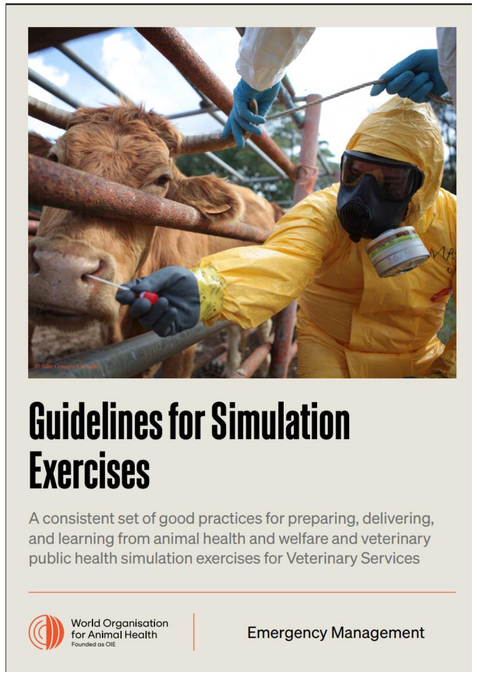
Ability to launch a rapid response

FMD, ASF, CSF, HPAI, AHS, emerging diseases

Contingency plan

- ✓ Chain of command, framework for cooperation
- ✓ Facilities, laboratories, equipment, personnel, emergency funds, other all other appropriate materials and resources necessary for the rapid and efficient eradication
- ✓ Disease control centres and expert groups
- ✓ Disease control measures, emergency vaccination,
- ✓ Demarcation of restricted zones
- ✓ Coordination with neighbouring Member States and neighbouring third countries and territories

Simulation exercises (SimEx)



Instructions manuals

Outbreak!!!

Dead elephant seals line a beach in Argentina in fall 2023. Avian influenza has caused the catastrophic die-off of thousands of elephant seals in Argentina, raising concerns for wildlife and cross-species transmission. (Ralph Vanstreels/UC Davis)

Sandwich terns (***Thalasseus sandvicensis)***

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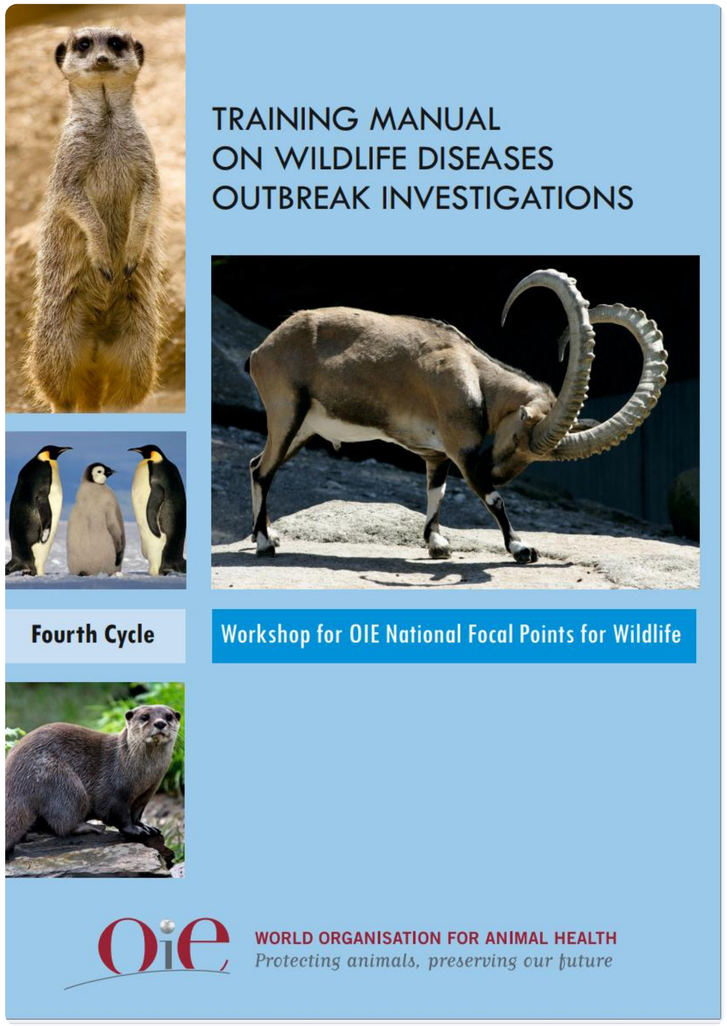


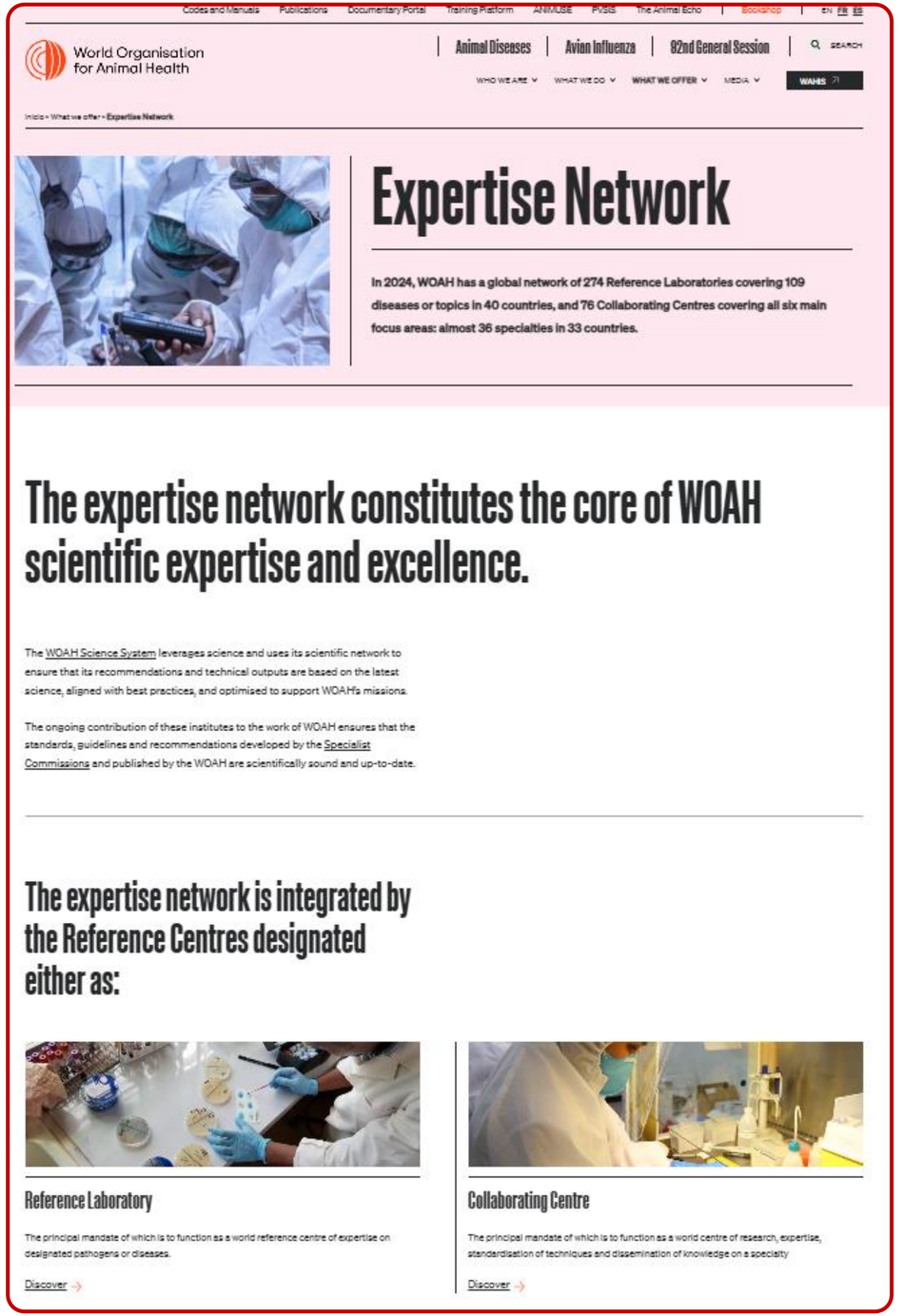
Verify that an outbreak is occurring-real or false alarm?

- Normal mortality?
- Changes in reporting systems?
- Changes in awareness resulting in higher reporting?
- If a pathogen was identified, is it the cause of the mortality?

Guillemot (*Uria aalge*)

Confirm the diagnosis

- Laboratory investigation, identification of pathogen
- WOAH and NRL and reference laboratories, confirmation
- Chain of communication of results



Establish case definition

1. Population

2. Place

3. Time-frame

4. Geographic distribution/ limits

5. Clinical signs

6. Laboratory confirmation (confirmed, suspected, probable case)

Descriptive epidemiology

1. Who (what population is affected?)

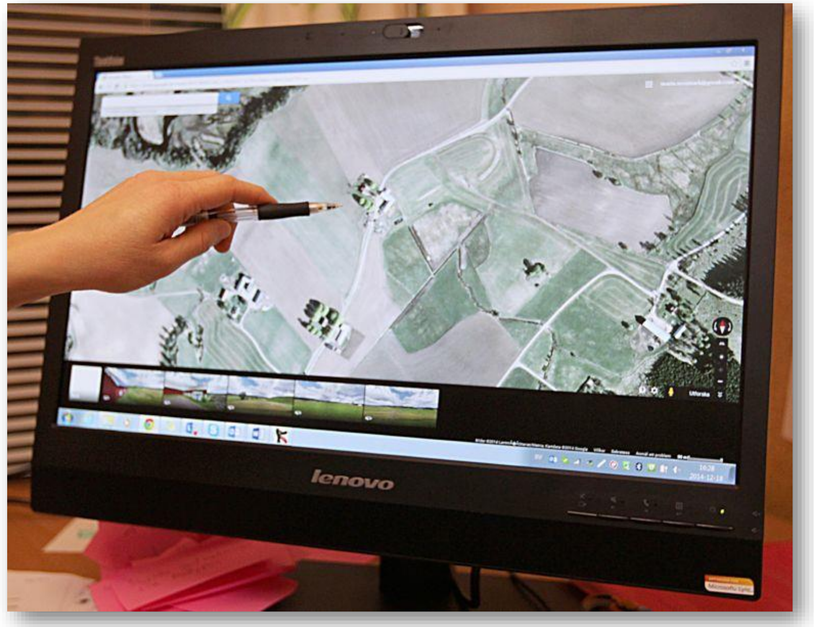
2. What (infectious cause or something else?)

3. Where (geographic extent of the problem)

4. When (time-frame of the event? Is it still occurring?)

Hypothesis generation

Analytic epidemiology



Preliminary control/prevention of spread

- ✓ Carcass removal and disposal
- ✓ Protect the live and apparently healthy animals as much as possible
- ✓ Manage movement of wildlife (limit dispersal, hold in an area, move them away)
- ✓ Disinfection
- ✓ Insect control
- ✓ Vaccination
- ✓ Access and movement restrictions for people

https://www.ako-agrar.com/en/wildlife-defence/wild-boar

Communicate

- ✓ Pre-established inter-ministerial or interdepartmental collaboration on communication
- ✓ Points of contact (POC) known and easily located
- ✓ Daily communication between any involved agencies
- ✓ Explain the process in place to find answers
- ✓ Build trust and credibility by expressing empathy, caring, competence, expertise, honesty, openness, commitment and dedication

Be first. Be right. Be credible.

BIRDGUIDES
FIRST FOR BIRD NEWS

Bird flu kills thousands of Sandwich Terns at North Sea colonies

Thousands of Sandwich Terns and other species have perished in northern France and The Netherlands as this summer's outbreak of avian influenza continues to spread across northern Europe.

sky news

Highly pathogenic bird flu killing hundreds of seabirds along Scottish coast

Over 1,000 gannets and hundreds of great skuas have been found dead across Shetland, Orkney and the Western Isles.

BBC NEWS

Avian flu hits world's largest gannet colony on Bass Rock

Establish disease surveillance/monitoring

- ✓ What work will continue into the next phase?
- ✓ How will you monitor for control of disease?
- ✓ How will you setup and design your surveillance plan?
- ✓ What additional tools and resources are needed?

https://wildlifeobservatory.org/wildlife-monitoring/

Acknowledgements

SVAs wildlife team (www.SVA.se)